



ACQUISITION,
TECHNOLOGY
AND LOGISTICS

THE UNDER SECRETARY OF DEFENSE

3010 DEFENSE PENTAGON
WASHINGTON, DC 20301-3010

MAR 15 2012

MEMORANDUM FOR CHAIRMAN, DEFENSE SCIENCE BOARD

SUBJECT: Terms of Reference – Defense Science Board Study on Technology and Innovation Enablers for Superiority in 2030

The 2012 Defense Strategic Guidance includes the tenet that technological superiority will continue to be a critical enabler for superior U.S. warfighting capabilities. Along with technologies developed in the private sector, the research and development investments that the Department of Defense (DoD) will make over the next several years will become the basis for future capabilities provided by new and enhanced systems and operational concepts. However, declining budgets will force the Department to be selective in its research and development investments.

The Defense Science Board (DSB) is requested to conduct a study of emerging technologies that will enable the next generation of dominant military capabilities to be in development or fielded by 2030. The products of the study should be:

1. A set of recommendations intended to guide the DoD research and development investments in applied technology and technology demonstrations over the period of 2014 to 2020;
2. Mapping of the identified technologies to applications and capabilities that may be enabled; and
3. For a select set of promising technologies, recommended experiments or concept demonstrations that foster innovation and provide entry ramps to enhance operational capabilities via block upgrades to existing systems or as entry ramps to new systems and operational concepts.

The study should be guided by the January 2012 military strategy guidance titled "Sustaining US Global Leadership: Priorities for 21st Century Defense."

The study should include surveying and assessing the potential for significant advances in technology outside DoD that could contribute to future military capabilities. These advances could augment DoD investments in areas such as: quantum computing, micro-electronics, robotics, nanomaterials, genetics, "big data," alternative energy sources, advanced materials, and modeling and simulation.

Technologies that have the potential to significantly enhance or transform the nature of warfare in the air, sea, land, space, and cyber regimes should be the focus of this study.

A study subcommittee will be authorized access to programs at all classification levels.

I will sponsor the study. Dr. Jim Tegnalia and Mr. Jim Shields will serve as co-chairmen of the Task Force. Dr. Melissa Flagg and Lt Col Dan Tadevich, U.S. Air Force, Office of the Assistant Secretary of Defense for Research and Engineering, will serve as Executive Secretaries, and CDR Doug Reinbold, U.S. Navy, will serve as the DSB Secretariat Representative

The study will operate in accordance with the provisions of P.L. 92-463, the "Federal Advisory Committee Act," and DoD Directive 5105.4, "DoD Federal Advisory Committee Management Program." It is not anticipated that this study will need to go into any "particular matters" within the meaning of title 18, U.S.C., section 208, nor will it cause any member to be placed in the position of action as a procurement official.

A handwritten signature in black ink, appearing to be 'Frank Kendall', with a long horizontal line extending to the right.

Frank Kendall
Acting